UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,915	12/09/2003	Matthew L. Cooper	CQ10210	4729

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SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER
TIMBLIN, ROBERT M

ART UNIT	PAPER NUMBER
2167	

NOTIFICATION DATE	DELIVERY MODE
03/23/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *14 January 2009*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,3-16 and 18-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1, 3-16, and 18-29* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This office action corresponds to application 10/729,915 and Applicant's

remarks/amendments filed 1/14/2009.

Response to Amendment

The Amendments submitted 1/14/2009 have been acknowledged and entered.

Claims 1, 6, 11, 16, 22, and 26 have been amended while no claims have been added

or canceled. Therefore claims 1, 3-16, and 18-29 are currently pending.

Claim Objections

Previous objections to claims 11 and 26 have been removed in light of

Applicant's remarks (p. 16 of the 1/14/2009) and correcting amendments thereto.

35 USC § 101

Claim 26 is accepted under 35 USC 101 as the claim recites a computerized

system while including an input link (referring to Applicants figure 18) to suggest the

system is a hardware system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 11, 12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platt et al. ('Platt' hereafter; U.S. Patent 6,993,532) in view of Zhang et al. ('Zhang' hereafter; U.S. Patent 6,944,607).

With respect to claim 1, Platt discloses A method for organizing a plurality of data files using meta-data wherein at least one meta-data element is associated with each data file, the method comprising:

extracting (col. 11 line 39-41), the at least one meta-data element (drawing reference 725, 730) associated with each data file (col. 6 line 45-49; e.g. user items such as songs, movies images, etc as well as seed song metadata; col. line 35-38);

organizing the extracted meta-data elements (figure 3) into a single ordered set (drawing reference 130) wherein the set is ordered consecutively based on values (col. 7 line 32-41; such as generating an index of names) for one or more of the extracted meta-data elements (drawing reference 725, 730);

calculating pair-wise differences (col. 3 line 40-44 and drawing reference 530) between values (col. 9 table 1) of the extracted meta-data elements (drawing reference 725, 730) for all possible pairs of data files (col. 20 line 3-27; e.g. "compute similarity over all possible pairs of songs on the seed list and user list subject to limits" and further "sort final list by decreasing similarity");

multiplying each pair-wise difference (col. 3 line 40-44, drawing reference 530, and col. 19 line 59-67 and fig. 16) to obtain a plurality of similarity values (drawing

reference 550) for determining clustering based on the similarity values (col. 3 line 13-22; e.g. generating a list of similar items based on their [metadata] relation); and

dividing the selected data files (col. 3 line 7; i.e. generating lists) into groups based on the similarity values (drawing reference 550).

Platt does not appear to expressly disclose inputting at least one value of a clustering sensitivity parameter, said clustering sensitivity parameter defining granularity of the clustering.

Zhang, however, teaches inputting at least one value of a clustering sensitivity parameter (col. 4 line 60-64; e.g. a size parameter), said clustering sensitivity parameter (col. 4 line 60-64; e.g. a size parameter) defining granularity of the clustering (col. 5 line 1-12) for defining a cluster granularity.

In the same field of endeavor, (i.e. clustering based on metadata and features), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the clustering sensitivity parameter of Zhang would have given Platt a selectable clustering method for a user to tailor playlists with items of similar metadata. Such a benefit would have been realized when a user is able to select closely similar or dissimilar songs (Platt, col. 5 line 43-48).

With respect to claim 11, Platt discloses A method for organizing a plurality of data files stored in a digital memory using meta-data, wherein at least one meta-data

element is at least associated with a corresponding one of the plurality of data files, the method comprising:

extracting (col. 11 line 39-41) from the memory (430) meta-data elements (drawing reference 725, 730) of the plurality of data files (col. 6 line 45-49; e.g. user items such as songs, movies images, etc);

organizing the extracted meta-data elements (figure 3) into a single ordered set wherein the set is ordered consecutively based on values for the extracted meta-data elements (col. 7 line 32-41; such as generating an index of names)

calculating pair-wise differences (col. 3 line 40-44 and drawing reference 530) between values (col. 9 table 1) of the extracted meta-data elements (drawing reference 725, 730) for all possible pairs of data files (col. 20 line 3-27; e.g. "compute similarity over all possible pairs of songs on the seed list and user list subject to limits" and further "sort final list by decreasing similarity");

multiplying each pair-wise difference col. 3 line 40-44, drawing reference 530, and col. 19 line 59-67 and fig. 16) by the clustering sensitivity parameter to obtain a plurality of similarity values (drawing reference 550);

determining a structure within the meta-data elements by comparing, for at least a subset of the plurality of data files, the similarity values (col. 3 line 34-40; i.e. generating a list of similar items); and,

storing the structure of the data files in a memory (drawing references 630, 1760).

Platt does not appear to expressly disclose inputting at least one value of a clustering sensitivity parameter, said clustering sensitivity parameter defining granularity of the clustering.

Zhang, however, teaches inputting at least one value of a clustering sensitivity parameter (col. 4 line 60-64; e.g. a size parameter), said clustering sensitivity parameter (col. 4 line 60-64; e.g. a size parameter) defining granularity of the clustering (col. 5 line 1-12) for defining a cluster granularity.

In the same field of endeavor, (i.e. clustering based on metadata and features), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the clustering sensitivity parameter of Zhang would have given Platt a selectable clustering method for a user to tailor playlists with items of similar metadata. Such a benefit would have been realized when a user is able to select closely similar or dissimilar songs (Platt, col. 5 line 43-48).

With respect to claim 12, Platt discloses the method of claim 11, further comprising clustering the data files into groups using the determined structure of the meta-data elements (figure 5).

With respect to claim 14, Platt teaches determining a similarity value by comparing at least some of the meta-data elements in one cluster of data files to at

least some other ones of the meta data elements in that element cluster of data files

(figure 5);

determining a dissimilarity value (fig. 11) by comparing at least some of the meta-

data elements in one cluster of data files to at least some of the meta-data elements in

another cluster of data files (abstract) for finding differing items.

With respect to claim 15, Platt teaches determining a value corresponding to a

desired grouping of the clusters of data files based on the differences of the similarity

values and the dissimilarity values (col. 5 lines 43-48).

With respect to claim 16 Platt discloses A storage medium storing a set of

program instructions executable on a data processing device and usable to organize a

plurality of data files by using meta-data wherein at least one meta-data element is

associated with each data file, the program comprising:

instructions for extracting (col. 11 line 39-41), the at least one meta-data element

(drawing reference 725, 730) associated with each of the data files (col. 6 line 45-49;

e.g. user items such as songs, movies images, etc as well as seed song metadata; col.

line 35-38);

instructions for organizing (figure 3) the extracted meta-data elements in a

desired order into a single ordered set wherein the set is ordered consecutively based

on at least one of: chronological, alphabetical numerical, or geographical ordering (col.

7 line 32-41; such as generating an index of names);

instructions for calculating pair-wise differences (col. 3 line 40-44 and drawing reference 530) between values (col. 9 table 1) of each of the extracted meta-data elements (drawing reference 725, 730) for all possible pairs of data files (col. 20 line 3-27; e.g. "compute similarity over all possible pairs of songs on the seed list and user list subject to limits" and further "sort final list by decreasing similarity");

instructions for multiplying each pair-wise difference (col. 3 line 40-44, drawing reference 530, and col. 19 line 59-67 and fig. 16) by the clustering sensitivity parameter to obtain a plurality of similarity values (drawing reference 550); and

instructions for dividing the data flies into groups based on the similarity values of the extracted meta-data elements (drawing reference 550).

Platt does not appear to expressly disclose inputting at least one value of a clustering sensitivity parameter, said clustering sensitivity parameter defining granularity of the clustering.

Zhang, however, teaches inputting at least one value of a clustering sensitivity parameter (col. 4 line 60-64; e.g. a size parameter), said clustering sensitivity parameter (col. 4 line 60-64; e.g. a size parameter) defining granularity of the clustering (col. 5 line 1-12) for defining a cluster granularity.

In the same field of endeavor, (i.e. clustering based on metadata and features), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the clustering sensitivity parameter of Zhang would have given Platt a selectable clustering method for a user to tailor playlists with items of similar metadata. Such a benefit would

have been realized when a user is able to select closely similar or dissimilar songs (Platt, col. 5 line 43-48).

Claims 4-7, 13, 18, 20-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platt and Zhang as applied to claims 1, 11, 12, and 16 above in view of Foote (Foote, "Automatic Audio Segmentation Using a Measure of Audio Novelty', FX Palo Alto Laboratory Inc).

With respect to claims 4 and 20 and similar claim 27, Platt and Zhang fails to teach determining at least one similarity value as presented in the corresponding calculation.

Foote, however, teaches determining at least one similarity value as presented as the calculation on page 452 where a distance measure is computed to yield a similarity score.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the computation of Foote would have given Platt and Zhang's system a property that can yield a similarity score (452, subsection A). Such a calculation would help Platt and Zhang further analyze data files.

This rejection applies equally well to claims 20 and 27.

With respect to claims 5 and 18 Platt and Zhang fails to teach determining, for each of at least some data files, at least one novelty value for that data file based on the at least one similarity value for that data file and for a number of nearby data files.

Foote, however teaches this limitation as finding the novelty measure to detect a novelty value (subsection B 453-454).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the computation of Foot would have given Platt and Zhang's system the ability to detect novelty value (454) and further to help analyze data files.

With respect to claims 6 and 22 Foote teaches determining at least one novelty value as presented as the calculation on page 454, where novelty $N(i)$ is computed to detect a novelty value. The Gaussian tapered checkerboard kernel can be found within reference to figure 3 on page 453. The motivation for combining Foote to Platt and Zhang can equally apply well from the rejection of claims 4 and 20 and similar claim 27 above.

With respect to claims 7, 13 and 21 Platt and Zhang fails to teach determining at least one boundary location between ones of the plurality of data files based on the at least one novelty value determined for at least some of the data files.

Foote, however, teaches determining at least one boundary location between ones of the plurality of data files based on the at least one novelty value determined for

at least some of the data files as extracting segment boundaries (subsection C, 454) to estimate boundaries.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because determining at least one boundary location of Foote would have given Platt and Zhang's system a good estimate of boundaries (under *Audio segmentation and indexing* 455).

Claims 8-10, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platt/Zhang and Foote as set forth in claims 4-7, 18, and 20-22 above and further in view of Schwanke (US 5,485,621).

With respect to claims 8 and 23, the combination of Platt, Zhang and Foote fails to teach determining a confidence value for that boundary location. Schwanke, however, teaches this limitation (col. 21, lines 43-45) to provide a decision on which groups to combine.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because this teaching of Schwanke would have given the combination of Platt/Zhang and Foote's system a decision on which groups to combine (abstract, Schwanke).

With respect to claims 9 and 24, combination of Platt, Zhang and Foote fails to expressly teach the determination of the confidence value as substantially claimed. Schwanke, however, teaches the confidence value as substantially claimed (e.g. col. 21 line 43-col. 22 line 22) for determining a confidence in similarity.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because this teaching of Schwanke would have given the combination of Platt/Zhang and Foote's system a decision on which groups to combine (abstract, Schwanke).

With respect to claims 10 and 25 Platt and Zhang fails to teach at least one parameter value that maximizes the confidence value.

Foote, however, teaches at least one parameter value that maximizes the confidence value as the similarity matrix S will have the maximum values (3rd paragraph in subsection A, page 452). The motivation for combining Foote to Platt and Zhang can equally apply well from the rejection of claims 4 and 20 and similar claim 27 above.

With respect to claim 26, the limitations of this claim been addressed in the preceding claims set forth above. Accordingly, these claims have been rejected for the same reasons as set forth above by the combination of Platt/Zhang and Foote in further view of Schwanke.

Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

Platt, Zhang and Foote as applied to claims 1 and 27 above in further view of Gargi et

al. ('Gargi' hereinafter) (U.S. Patent Application 2005/0027712 A1).

With respect to claim 28, Platt and Zhang fail to teach an exponentially

decreasing function of the scalar magnitude of the difference between t.sub j and t.sub.j

relative to K.

Gargi, however, teaches this limitation in the formula above [0055] and in respect

to a weighting factor [0051] for efficiently organizing data.

It would have been obvious to one of ordinary skill in the data processing art at

the time of the present invention to combine the teachings of the cited references

because the teachings of Gargi would have provided to Platt and Zhang's system aid in

developing an organized collection of data ([0009], Gargi).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Platt and

Zhang as applied to claim 1 above and further in view of Gargi.

With respect to claim 29, Platt and Zhang fail to teach the similarity value of the

at least one pair of the selected data files comprises a term depending on an inner

product of v.sub i and v.sub j relative to K, where K is the clustering sensitivity

parameter value, V.sub i is an actual vector value determined form the I data file, and

v.sub j is an actual vector value determined from the j data file.

Gargi, however, teaches this limitation in the formula below [0053] for efficiently organizing data.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Gargi would have provided to Platt and Zhang's system aid in developing an organized collection of data ([0009], Gargi).

Response to Arguments

Applicant's arguments filed 1/14/2009 have been fully considered but they are not persuasive.

Applicant substantively argues (e.g. page 18-25) that Platt and Zhang do not teach a "method for organizing a plurality of data files using meta-data...comprising: extracting the ... meta-data element associated with each data file; organizing the extracted meta-data elements into a single ordered set.... calculating pair-wise differences... for all possible pairs of data files". Examiner disagrees in the following:

Specifically, as addressed in the interview of 12/17/2008, Examiner maintains that at least Platt teaches this feature (e.g. col. 20 line 3-27) by disclosing "compute[ing] similarity over all possible pairs of songs on the seed list and user list subject to limits" and further "sort[ing] final list by decreasing similarity".

That is, as seen in the above, Platt teaches creating a final list by comparing all possible pairs of songs on a seed list and user list. As broadly found in the claims, it is

merely recited that "a plurality of data files are organized using meta-data..." as such, the songs of a user are organized by pair-wise comparison to be inserted into a final list based on similarities.

Applicant argues that Platt merely confirms that a similarity is found between a seed list and a user list; not between the members of the user list themselves (reply, page 22 last paragraph). Applicant further argues "[possible pair] does not indicate that both members of the pair are user songs." In light of the arguments, Examiner submits the claim is not limited to comparing songs within a given set (e.g. an ordered set); however, the claim is broadly recited as "all possible pairs of data files" and therefore does not recite limiting the comparison to items specific to a given set. In response to applicant's argument that the references fail to show certain features of Applicant's invention, it is noted that the features upon which applicant relies (i.e., the "possible pairs" indicating both members are of a specific set (which is appeared to be argued as the "single ordered set") are not recited in the rejected claim(s)). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In light of the above, Examiner submits that a comparison of two song lists disclose the present claims as these comparisons teach (emphasis added) "all possible pairs of data files".

Nonetheless, Examiner submits that Platt provides a user's collection of media (e.g. drawing reference 130) that is ordered (i.e. indexed; col. 7 line 32-41). Further,

Platt provides pseudocode (col. 20) which teaches calculating pair-wise differences between vales of the extracted meta-data elements for all possible pairs of data files (i.e. files of the user's collection) to generate a final list.   Thus, the argument that "possible pairs" does not indicate that both members of the pair are user songs" is unpersuasive in that Platt teaches generating a playlist of user songs from user songs (i.e. all songs in the collection for generating a playlist are user songs; see at least figure 1).

In light of the above, Examiner respectfully maintains that Applicant's amendments are taught and thus insufficient to overcome the cited references.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.   In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.   In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-Th 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ROBERT TIMBLIN/

Examiner, Art Unit 2167